

General

Title

Acute myocardial infarction: percent of patients with a history of smoking cigarettes who receive smoking cessation advice or counseling during the hospital stay.

Source(s)

Specifications manual for national hospital inpatient quality measures, version 3.1a. Centers for Medicare & Medicaid Services (CMS), The Joint Commission; 2010 Apr 1. various p.

Measure Domain

Primary Measure Domain

Process

The validity of measures depends on how they are built. By examining the key building blocks of a measure, you can assess its validity for your purpose. For more information, visit the [Measure Validity](#) page.

Secondary Measure Domain

Does not apply to this measure

Brief Abstract

Description

This measure is used to assess the percent of acute myocardial infarction (AMI) patients with a history of smoking cigarettes who are given smoking cessation advice or counseling during the hospital stay. For the purposes of this measure, a smoker is defined as someone who has smoked cigarettes anytime during the year prior to hospital arrival.

Rationale

Smoking cessation reduces mortality and morbidity in all populations. Patients who receive even brief smoking-cessation advice from their care providers are more likely to quit. National guidelines strongly recommend smoking cessation counseling for smokers hospitalized with acute myocardial infarction (AMI)

(Fiore, 2008; Antman, 2004; Anderson, 2007; and Smith, 2006).

Primary Clinical Component

Acute myocardial infarction (AMI); smoking cessation advice/counseling

Denominator Description

Acute myocardial infarction (AMI) patients with a history of smoking cigarettes anytime during the year prior to hospital arrival (see the related "Denominator Inclusions/Exclusions" field)

Numerator Description

Acute myocardial infarction (AMI) patients (cigarette smokers) who receive smoking cessation advice or counseling during the hospital stay

Evidence Supporting the Measure

Evidence Supporting the Criterion of Quality

A clinical practice guideline or other peer-reviewed synthesis of the clinical evidence

One or more research studies published in a National Library of Medicine (NLM) indexed, peer-reviewed journal

Evidence Supporting Need for the Measure

Need for the Measure

Use of this measure to improve performance

Evidence Supporting Need for the Measure

Anderson JL, Adams CD, Antman EM, Bridges CR, Califf RM, Casey DE Jr, Chavey WE 2nd, Fesmire FM, Hochman JS, Levin TN, Lincoff AM, Peterson ED, Theroux P, Wenger NK, Wright RS, Smith SC Jr, Jacobs AK, Adams CD, Anderson JL, Antman EM, Halperin JL, Hunt SA, Krumholz HM, Kushner FG, Lytle BW, Nishimura R, Ornato JP, Page RL, Riegel B, American College of Cardiology, American Heart Association Task Force on Practice Guidelines (Writing Committee, American College of Emergency Physicians, Society for Cardiovascular Angiography and Interventions, Society of Thoracic Surgeons, American Association of Cardiovascular and Pulmonary Rehabilitation, Society for Academic Emergency Medicine. ACC/AHA 2007 guidelines for the management of patients with unstable angina/non-ST-Elevation myocardial infarction: a report of the American College of Cardiology. J Am Coll Cardiol. 2007 Aug 14;50(7):e1-157. [957 references] [PubMed](#)

Antman EM, Anbe DT, Armstrong PW, Bates ER, Green LA, Hand M, Hochman JS, Krumholz HM, Kushner FG, Lamas GA, Mullany CJ, Ornato JP, Pearle DL, Sloan MA, Smith SC Jr. ACC/AHA guidelines for the management of patients with ST-elevation myocardial infarction. A report of the Am Coll of Cardiol/American Heart Assoc Task Force on Practice Guidelines (Committee to revise the 1999 guidelines). Bethesda (MD): American College of Cardiology (ACC), American Heart Association (AHA); 2004. 211 p. [1398 references]

Fiore MC, Jaen CR, Baker TB, et al. Treating tobacco use and dependence: 2008 update. Clinical practice guideline. Rockville (MD): U.S. Department of Health and Human Services, Public Health Service; 2008 May.

Krumholz HM, Anderson JL, Bachelder BL, Fesmire FM, Fihn SD, Foody JM, Ho PM, Kosiborod MN, Masoudi FA, Nallamothu BK, American College of Cardiology/American Heart Association Task Force on Performance Measures, American Academy of Family Physicians, American College of Emergency Physicians, American Association of Cardiovascular and Pulmonary Rehabilitation, Society for Cardiovascular Angiography and Interventions, Society of Hospital Medicine. ACC/AHA 2008 performance measures for adults with ST-elevation and non-ST-elevation myocardial infarction [trunc]. J Am Coll Cardiol. 2008 Dec 9;52(24):2046-99.

Smith SC Jr, Allen J, Blair SN, Bonow RO, Brass LM, Fonarow GC, Grundy SM, Hiratzka L, Jones D, Krumholz HM, Mosca L, Pasternak RC, Pearson T, Pfeffer MA, Taubert KA. AHA/ACC guidelines for secondary prevention for patients with coronary and other atherosclerotic vascular disease: 2006 update. Endorsed by the National Heart, Lung, and Blood Institute. J Am Coll Cardiol. 2006 May 16;47(10):2130-9.

State of Use of the Measure

State of Use

Current routine use

Current Use

Accreditation

Collaborative inter-organizational quality improvement

External oversight/Medicaid

External oversight/Medicare

Internal quality improvement

National reporting

Pay-for-performance

Application of Measure in its Current Use

Care Setting

Hospitals

Professionals Responsible for Health Care

Measure is not provider specific

Lowest Level of Health Care Delivery Addressed

Single Health Care Delivery Organizations

Target Population Age

Age greater than or equal to 18 years

Target Population Gender

Either male or female

Stratification by Vulnerable Populations

Unspecified

Characteristics of the Primary Clinical Component

Incidence/Prevalence

In 2010, an estimated 785,000 Americans will have a new coronary event, and approximately 470,000 will have a recurrent event. An estimated additional 195,000 silent first myocardial infarctions occur each year. Approximately every 25 seconds, an American will have a coronary event, and approximately every minute, one will die. In 2004, AMI resulted in 695,000 hospital stays and \$31 billion in health expenditures. The risk of further cardiovascular complications, including recurrent MI, sudden cardiac death, heart failure, stroke, and angina pectoris, among AMI survivors is substantial.

Evidence for Incidence/Prevalence

Lloyd-Jones D, Adams RJ, Brown TM, Carnethon M, Dai S, De Simone G, Ferguson TB, Ford E, Furie K, Gillespie C, Go A, Greenlund K, Haase N, Hailpern S, Ho PM, Howard V, Kissela B, Kittner S, Lackland D, Lisabeth L, Marelli A, McDermott MM, Meigs J, Mozaffarian D, Mussolino M, Nichol G, Roger VL, Rosamond W, Sacco R, Sorlie P, Roger VL, Thom T, Wasserthiel-Smoller S, Wong ND, Wylie-Rosett J, American Heart Association Statistics Committee and Stroke Statistics Writing Group Members. Heart disease and stroke statistics--2010 update: a report from the American Heart Association. *Circulation*. 2010 Feb 23;121(7):e46-e215. [PubMed](#)

Association with Vulnerable Populations

Unspecified

Burden of Illness

In the United States, smoking-related illnesses accounted for an estimated 443,000 deaths each year between 2000 and 2004.

See also the "Incidence/Prevalence" field.

Evidence for Burden of Illness

American Cancer Society (ACS). Cancer facts & figures 2010. Atlanta (GA): American Cancer Society (ACS); 2010. 68 p.

Utilization

See the "Incidence/Prevalence" field.

Costs

See the "Incidence/Prevalence" field.

Institute of Medicine (IOM) Healthcare Quality Report Categories

IOM Care Need

Getting Better

Staying Healthy

IOM Domain

Effectiveness

Patient-centeredness

Data Collection for the Measure

Case Finding

Users of care only

Description of Case Finding

Discharges, 18 years of age and older, with a principal diagnosis of acute myocardial infarction (AMI) *and* a history of smoking cigarettes anytime during the year prior to hospital arrival

Denominator Sampling Frame

Patients associated with provider

Denominator Inclusions/Exclusions

Inclusions

Discharges, 18 years of age and older, with an International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM) Principal Diagnosis Code for acute myocardial infarction (AMI) as defined in Appendix A, Table 1.1, of the original measure documentation *and* a history of smoking cigarettes anytime during the year prior to hospital arrival

Exclusions

Patients less than 18 years of age
Patients who have a Length of Stay (LOS) greater than 120 days
Patients with *Comfort Measures Only* documented
Patients enrolled in clinical trials
Patients discharged/transferred to another hospital for inpatient care
Patients who left against medical advice or discontinued care
Patients who expired
Patients discharged/transferred to a federal health care facility
Patients discharged/transferred to hospice

Relationship of Denominator to Numerator

All cases in the denominator are equally eligible to appear in the numerator

Denominator (Index) Event

Clinical Condition

Institutionalization

Patient Characteristic

Denominator Time Window

Time window is a fixed period of time

Numerator Inclusions/Exclusions

Inclusions

Acute myocardial infarction (AMI) patients (cigarette smokers) who receive smoking cessation advice or counseling during the hospital stay

Exclusions

None

Measure Results Under Control of Health Care Professionals, Organizations and/or Policymakers

The measure results are somewhat or substantially under the control of the health care professionals, organizations and/or policymakers to whom the measure applies.

Numerator Time Window

Institutionalization

Data Source

Administrative data

Medical record

Level of Determination of Quality

Individual Case

Pre-existing Instrument Used

Unspecified

Computation of the Measure

Scoring

Rate

Interpretation of Score

Better quality is associated with a higher score

Allowance for Patient Factors

Unspecified

Standard of Comparison

External comparison at a point in time

External comparison of time trends

Internal time comparison

Evaluation of Measure Properties

Extent of Measure Testing

The core measure pilot project was a collaboration among The Joint Commission, five state hospitals associations, five measurement systems, and 83 hospitals from across nine states. Participating hospitals collected and reported data for acute myocardial infarction (AMI) measures from December 2000 to December 2001.

Core measure reliability visits were completed the summer of 2001 at a random sample of 16 participating hospitals across 6 states.

Preliminary data from the pilot project indicate that 65% of AMI patients with a history of smoking within the past year received smoking cessation advice or counseling.

This measure is reviewed bi-annually and revised as needed to ensure reliable specifications. An independent abstracting contractor is utilized by the Hospital Inpatient Quality Reporting Program to monitor validity of the measure specifications. Feedback from this contractor is incorporated into the proposed changes for each manual update.

Evidence for Reliability/Validity Testing

Telligen, Hospital Inpatient Quality Reporting Program Support Contractor. Hospital Inpatient Quality Reporting Program data validation inclusion list. [internet]. Baltimore (MD): Centers for Medicare & Medicaid Services (CMS); [updated 2013 May 22]; [accessed 2012 Jul 31].

The Joint Commission. A comprehensive review of development and testing for national implementation of hospital core measures. Oakbrook Terrace (IL): The Joint Commission; 40 p.

Identifying Information

Original Title

AMI-4: adult smoking cessation advice/counseling.

Measure Collection Name

National Hospital Inpatient Quality Measures

Measure Set Name

Acute Myocardial Infarction

Submitter

Centers for Medicare & Medicaid Services - Federal Government Agency [U.S.]

The Joint Commission - Health Care Accreditation Organization

Developer

Centers for Medicare & Medicaid Services/The Joint Commission - None

Funding Source(s)

All external funding for measure development has been received and used in full compliance with The Joint Commission's Corporate Sponsorship policies, which are available upon written request to The Joint Commission.

Centers for Medicare & Medicaid Services (CMS) funding is from the United States Government.

Composition of the Group that Developed the Measure

In February 1992, the Centers for Medicare & Medicaid Services (CMS) (formerly HCFA) and the American Medical Association convened a steering committee for the Cooperative Cardiovascular Project (CCP). The committee drafted measures heavily based on clinical practice guidelines developed by the American College of Cardiology (ACC) and the American Heart Association (AHA). More than 30 different physicians, health service researchers, and representatives of physician specialty societies or health care organizations participated in review and refinement of the measures. Acute myocardial infarction (AMI)

study groups at Quality Improvement Organizations (formerly Peer Review Organizations) from the states of Alabama, Connecticut, Iowa, and Wisconsin also contributed. A subgroup of this committee, including members of the ACC who had participated in the development of guidelines on treatment of AMI, assisted in developing 26 potential quality-of-care indicators. These indicators were reviewed by other representatives of the ACC, the American College of Physicians, the American Academy of Family Physicians, and a panel of practicing physicians participating in the Internal Medicine Center to Advance Research and Education Practice Guidelines Review Network, and eleven measures were finalized and implemented, including this measure. The Joint Commission was also a co-developer of this measure as well. The original versions of this measure have undergone revisions over the years, and have evolved into the current version being operationalized in the Hospital Inpatient Quality Reporting Program today.

The current Technical Expert Panel responsible for maintaining this measure includes representatives from the following organizations:

American College of Physicians
Duke University
American Medical Association
American College of Cardiology
Heart Failure Society of America
Agency for Healthcare Research and Quality
The Joint Commission
Mayo Foundation
Yale University
American Heart Association
Denver Veterans Affairs Medical Center
Mid America Heart Institute

Financial Disclosures/Other Potential Conflicts of Interest

Expert panel members have made full disclosure of relevant financial and conflict of interest information in accordance with the Conflict of Interest policies, copies of which are available upon written request to The Joint Commission and the Centers for Medicare & Medicaid Services (CMS).

Expert panel members have made full disclosure of relevant financial and conflict of interest information in accordance with the Conflict of Interest policies outlined in "A Blueprint for the CMS Measures Management System, Version 7" developed by the Health Services Advisory Group, Inc. available at the [CMS Web site](#) . Copies are available upon written request to CMS.

Included in

Hospital Compare

Hospital Quality Alliance

Adaptation

Measure was not adapted from another source.

Release Date

2000 Aug

Revision Date

2010 Apr

Measure Status

This is the current release of the measure.

This measure updates a previous version: Specifications manual for national hospital quality measures, version 3.0b. Centers for Medicare & Medicaid Services (CMS), The Joint Commission; 2009 Oct. various p.

Source(s)

Specifications manual for national hospital inpatient quality measures, version 3.1a. Centers for Medicare & Medicaid Services (CMS), The Joint Commission; 2010 Apr 1. various p.

Measure Availability

The individual measure, "AMI-4: Adult Smoking Cessation Advice/Counseling," is published in "Specifications Manual for National Hospital Inpatient Quality Measures." This document is available from [The Joint Commission Web site](#) . Information is also available from the [QualityNet Web site](#) . Check The Joint Commission Web site and QualityNet Web site regularly for the most recent version of the specifications manual and for the applicable dates of discharge.

Companion Documents

The following are available:

A software application designed for the collection and analysis of quality improvement data, the CMS Abstraction and Reporting Tool (CART), is available from the [CMS CART Web site](#) . Supporting documentation is also available. For more information, e-mail CMS PROINQUIRIES at proinquiries@cms.hhs.gov.

The Joint Commission. A comprehensive review of development and testing for national implementation of hospital core measures. Oakbrook Terrace (IL): The Joint Commission; 40 p. This document is available in Portable Document Format (PDF) from [The Joint Commission Web site](#) .

The Joint Commission. Attributes of core performance measures and associated evaluation criteria. Oakbrook Terrace (IL): The Joint Commission; 5 p. This document is available in PDF from [The Joint Commission Web site](#) .

Hospital compare: a quality tool provided by Medicare. [internet]. Washington (DC): U.S. Department of Health and Human Services; 2010 May 25; [accessed 2010 Aug 17]. This is available from the [Medicare Web site](#). See the related [QualityTools](#) summary.

NQMC Status

This NQMC summary was originally completed by ECRI on February 7, 2003. This NQMC summary was updated by ECRI Institute on October 6, 2005, April 16, 2007, and October 26, 2007. The Joint Commission informed NQMC that this measure was updated on August 13, 2008 and provided an updated version of the NQMC summary. This NQMC summary was updated accordingly by ECRI Institute on November 11, 2008. The information was verified by the Centers for Medicare & Medicaid Services (CMS)

on January 22, 2009. The Joint Commission informed NQMC that this measure was updated again on October 1, 2009 and provided an updated version of the NQMC summary. This NQMC summary was updated accordingly by ECRI Institute on November 25, 2009. The information was verified by CMS on February 18, 2010. This NQMC summary was updated again by ECRI Institute on October 8, 2010. The information was verified by The Joint Commission on December 3, 2010. The information was verified by CMS on February 6, 2011.

Copyright Statement

The Specifications Manual for National Hospital Inpatient Quality Measures [Version 3.1a, April, 2010] is the collaborative work of the Centers for Medicare & Medicaid Services and The Joint Commission. The Specifications Manual is periodically updated by the Centers for Medicare & Medicaid Services and The Joint Commission. Users of the Specifications Manual for National Hospital Inpatient Quality Measures should periodically verify that the most up-to-date version is being utilized.

Disclaimer

NQMC Disclaimer

The National Quality Measures Clearinghouse[®] (NQMC) does not develop, produce, approve, or endorse the measures represented on this site.

All measures summarized by NQMC and hosted on our site are produced under the auspices of medical specialty societies, relevant professional associations, public and private organizations, other government agencies, health care organizations or plans, individuals, and similar entities.

Measures represented on the NQMC Web site are submitted by measure developers, and are screened solely to determine that they meet the [NQMC Inclusion Criteria](#).

NQMC, AHRQ, and its contractor ECRI Institute make no warranties concerning the content or its reliability and/or validity of the quality measures and related materials represented on this site. Moreover, the views and opinions of developers or authors of measures represented on this site do not necessarily state or reflect those of NQMC, AHRQ, or its contractor, ECRI Institute, and inclusion or hosting of measures in NQMC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding measure content are directed to contact the measure developer.